

Kuskokwim River Salmon Assessment Update: 6/8/2017



This document presents the key assessment information considered by managers in-season. The production of this document is a collaborative effort between the ADF&G and USFWS. **All data and analyses contained are preliminary and are subject to change, so please make interpretations carefully.**

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Table of Contents:

- **Page 2:** Chinook Salmon Bethel Test Fishery Information
- **Page 3:** Chum Salmon Bethel Test Fishery Information
- **Page 4:** Chum/Sockeye:Chinook Salmon Ratio Information
- **Page 5:** Sonar Cumulative Count Information
- **Page 6:** Chinook Salmon Appendix
- **Page 7:** Chum Salmon Appendix

Abbreviations:

- BTF: Bethel Test Fishery
- ATF: Aniak Test Fishery
- CPUE: Catch-per-unit-effort
- EOS: End-of-Season

To view escapement information, please visit the ADF&G Kuskokwim River Fish Counts page:

- <http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareakuskokwim.salmon#fishcounts>

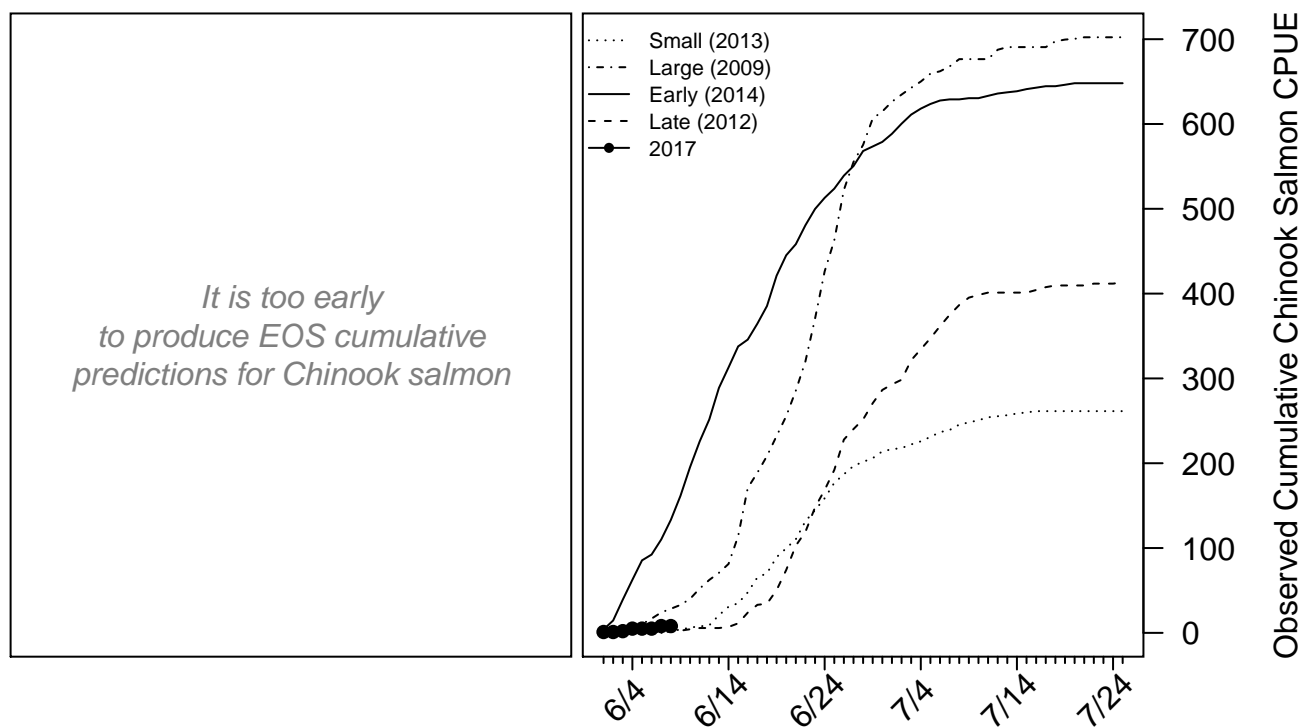
For the most up-to-date information regarding fishing opportunities please visit:

- **USFWS:** https://www.fws.gov/refuge/yukon_delta/wildlife_and_habitat/dailyupdate.html
- **ADF&G:** http://www.adfg.alaska.gov/index.cfm?adfg=cfnews_mobile.main

Chinook Salmon(6/8)

- The BTF daily CPUE was **0**.
- The BTF cumulative CPUE is **8**.
- **22%** years since 2008 fell below this cumulative CPUE.
- **7%** of the run is complete based on historical average run timing.
- **8%** of the run is complete based on a preliminary run timing forecast (official forecast will be available around 6/10).
- Late run scenarios are considered highly unlikely at this time due to the preliminary timing forecast (1.4 days early).
- **8 - 14%** of the run is expected to pass in the next 5 days.
- Over the last 3 days, Chinook salmon made up **25%** of the BTF catches, compared to **63%** on average.

Chinook Salmon Figure 1. *Left:* will show predicted cumulative EOS BTF CPUE according to various run timing scenarios when enough data have been collected. *Right:* The cumulative BTF CPUE from 2017 plotted along with four previous years intended to represent a range of early/late and small/large index values.

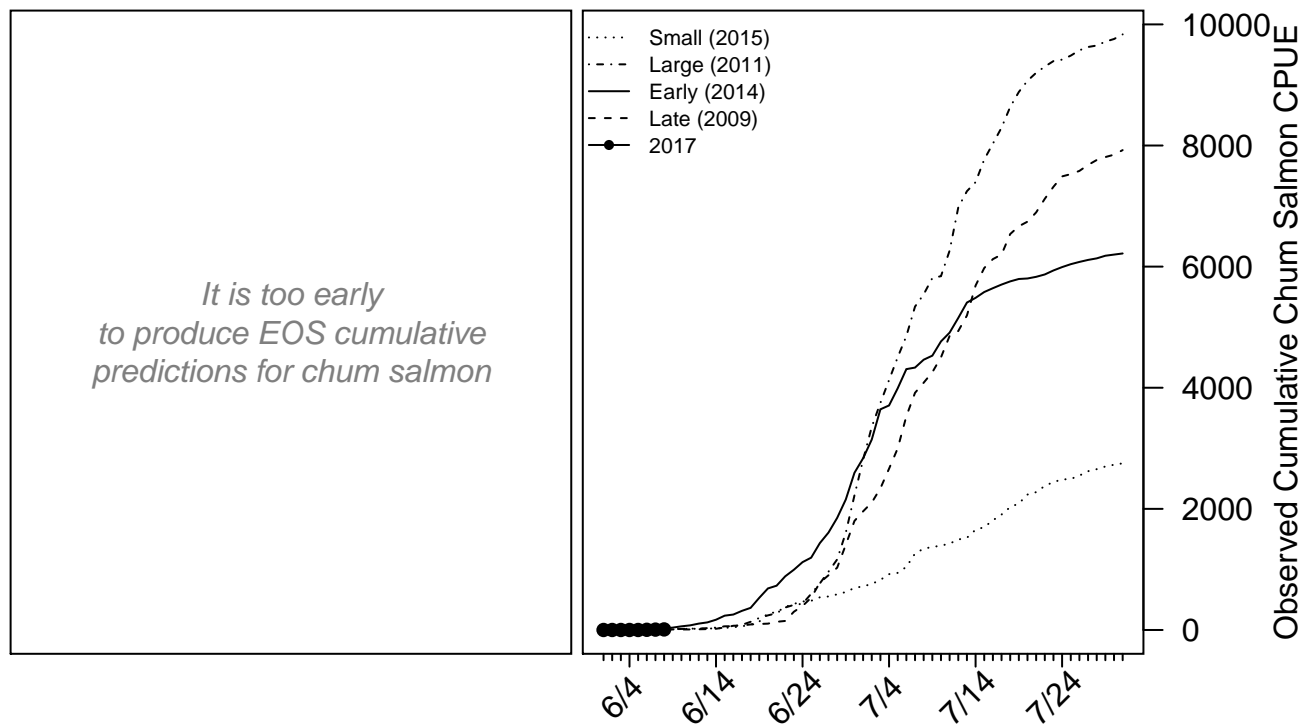


For more detailed information, see the Chinook salmon appendix at the end of this document.

Chum Salmon (6/8)

- The BTF daily CPUE was **3**.
- The BTF cumulative CPUE is **9**.
- **67%** years since 2008 fell below this cumulative CPUE.
- **1%** of the run is complete based on historical average run timing.
- No run timing forecast is available for chum salmon.
- **1 - 2%** of the run is expected to pass in the next 5 days.
- Over the last 3 days, chum salmon made up **75%** of the BTF catches, compared to **29%** on average.

Chum Figure 1. *Left:* will show predicted cumulative EOS BTF CPUE according to various run timing scenarios when enough data have been collected. The dashed horizontal line shows the EOS value from 2016. *Right:* The cumulative BTF CPUE from 2017 plotted along with four years intended to represent a range of early/late and small/large index values.

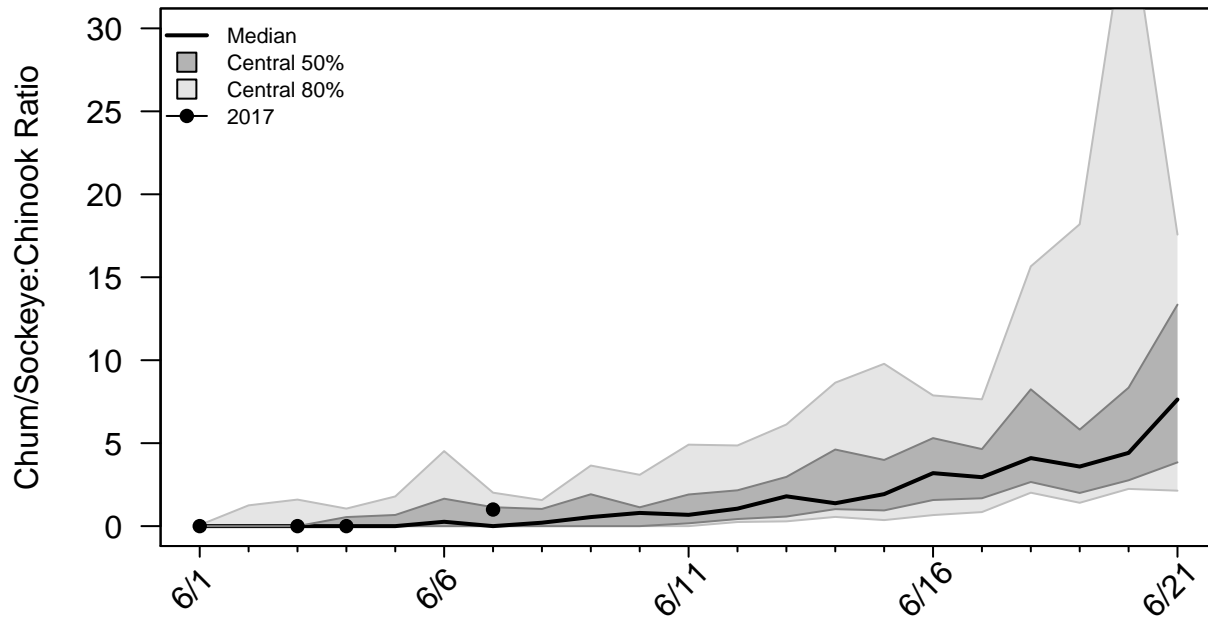


For more detailed information, see the chum salmon appendix at the end of this document.

Chum/Sockeye:Chinook Salmon Ratio

This ratio is calculated by dividing the total number of chum and sockeye salmon counted by the number of Chinook salmon counted by a project. A value of zero indicates Chinook salmon were counted, but not chum or sockeye salmon. A missing value on a day the project operated indicates no Chinook salmon were counted.

Ratio Figure 1. Time series of the species ratio with historical quantiles shown as grey regions and the ratio time series for 2017 shown with points connected by lines.



Ratio Table 1. A subset of the species ratios displayed in **Ratio Figure 1**, including the ratios from the sonar project and ATF.

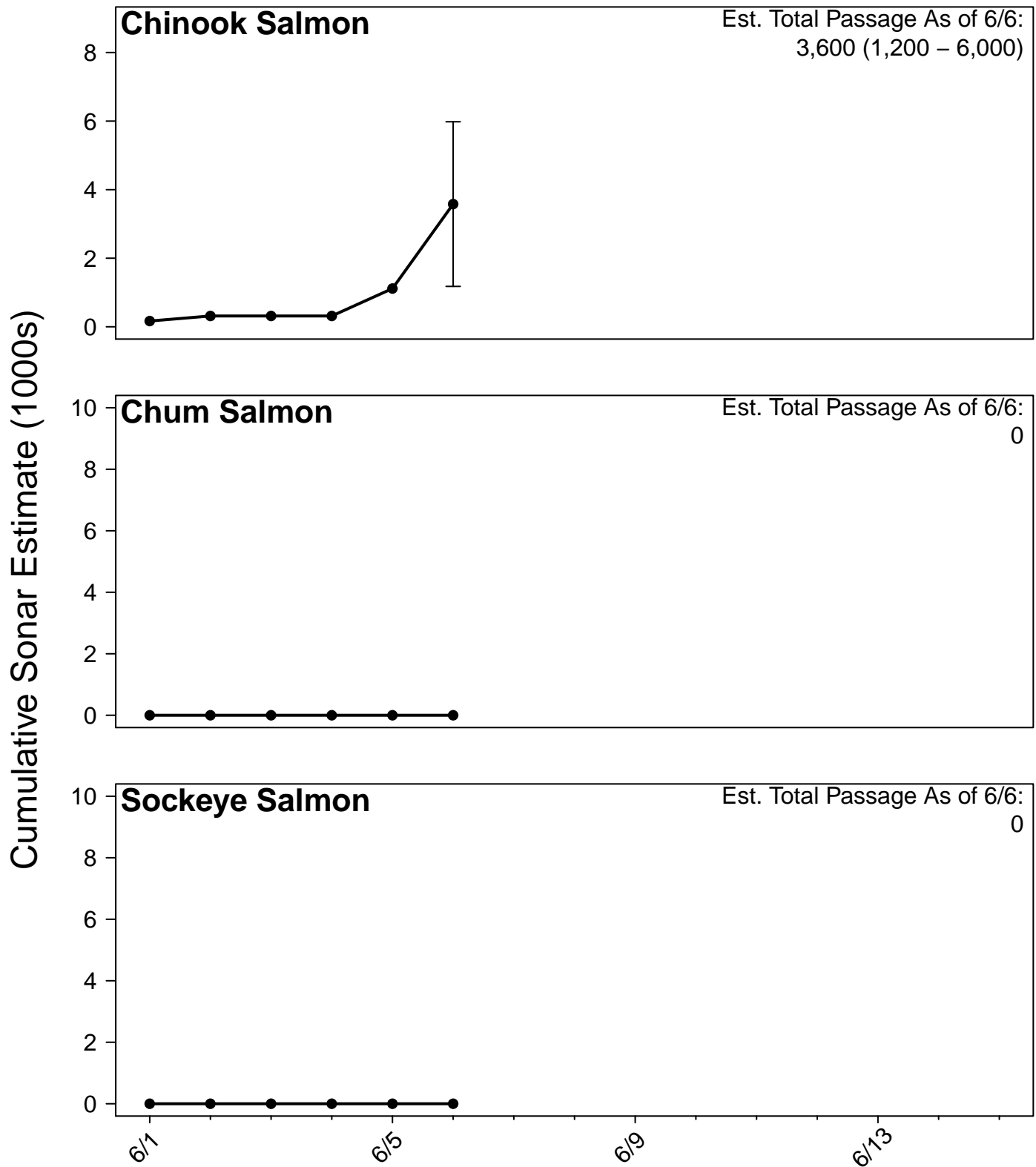
Date	2017 BTF	BTF Median	BTF Lower 10%	BTF Upper 10%	2017 Sonar	2017 ATF
6/5	—	0	0	1.79	0	—
6/6	—	0.26	0	4.52	0	0
6/7	1	0	0	2.02	0	0
6/8	—	0.21	0	1.57	—	0
6/9		0.54	0	3.65		
6/10		0.8	0	3.09		
6/11		0.68	0	4.91		

Ratio Table 2. The probability that a given species ratio will be exceeded by a certain day in the BTF (calculated based on all previous years: 1984 - 2016).

Date	Ratio > 1	Ratio > 3	Ratio > 5	Ratio > 10	Ratio > 20
6/5	0.27	0.09	0.03	0	0
6/6	0.42	0.18	0.09	0	0
6/7	0.52	0.21	0.09	0	0
6/8	0.58	0.24	0.09	0	0
6/9	0.7	0.3	0.09	0.03	0.03
6/10	0.73	0.36	0.12	0.03	0.03
6/11	0.79	0.45	0.18	0.03	0.03

Sonar

Sonar Figure 1. Cumulative estimates of salmon passage from the 2017 sonar operation through the last complete reporting day. Error bars represent the 95% confidence interval for the most recent complete reporting day. The sonar project began partial operations on June 1 and full operations on June 3.



Chinook Salmon Appendix

Chinook Salmon Table A1. Cumulative CPUE from the BTF.

Date	2017	2016	2015	2014	2013	5-Yr Avg.	2008 - 2016 Avg.
6/5	5	53	24	85	0	84	64
6/6	5	60	35	92	0	97	75
6/7	8	78	53	110	0	33	23
6/8	8	89	60	133	2	38	28
6/9		114	76	162	4	48	36
6/10		126	89	195	6	57	44
6/11		144	104	226	8	72	54
EOS		681	625	650	261	527	556

Chinook Salmon Table A2. Cumulative CPUE from the ATF.

Date	2017	2016	2015
6/5	8	251	64
6/6	24	300	64
6/7	40	344	81
6/8	48	397	98
6/9		466	115
6/10		589	149
6/11		659	186
EOS		2,729	2,916

Chinook Salmon Table A3. Percent of run complete according to various historical run timing scenarios and the preliminary 2017 run timing forecast (with forecast uncertainty).

Timing	Historical Midpoint	Historical 6/8 Cumulative %	Forecasted Midpoint	Forecasted 6/8 Cumulative %
Earliest	6/15	22%	6/15	24%
Early 10%	6/18	14%	6/17	18%
Early 25%	6/21	11%	6/19	13%
Median	6/23	7%	6/21	9%
Late 25%	6/24	4%	6/23	5%
Late 10%	6/26	4%	6/25	3%
Latest	7/3	0%	6/27	2%

Chum Salmon Appendix

Chum Salmon Table A1. Cumulative CPUE from the BTF.

Date	2017	2016	2015	2014	2013	5-Yr Avg.	2008 - 2016 Avg.
6/5	0	0	0	14	0	21	17
6/6	3	3	3	14	0	25	20
6/7	6	3	15	21	0	3	3
6/8	9	16	15	26	0	4	4
6/9		16	18	39	0	8	6
6/10		19	18	60	0	12	9
6/11		22	18	76	0	15	12
EOS		4,001	2,945	6,343	5,708	5,178	6,508

Chum Salmon Table A2. Cumulative CPUE from the ATF.

Date	2017	2016	2015
6/5	8	5	9
6/6	8	5	9
6/7	8	12	17
6/8	8	12	17
6/9		19	17
6/10		19	25
6/11		19	40
EOS		5,304	5,669

Chum Salmon Table A3. Percent of run complete according to various historical run timing scenarios.

Timing	Midpoint	6/8 Cumulative %
Earliest	6/24	4%
Early 10%	7/1	2%
Early 25%	7/3	2%
Median	7/6	1%
Late 25%	7/7	1%
Late 10%	7/10	0%
Latest	7/12	0%